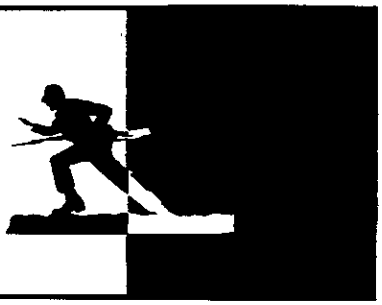
TRAINING NOTES



Fire Support
Wedge Formation in DESERT STORM

CAPTAIN RONALD A. HOSKINSON

When the 3d Battalion, 82d Field Artillery, 1st Cavalry Division, first deployed to Southwest Asia for Operation DESERT SHIELD, it became apparent that the factors of mission, enemy, terrain, troops, and time (METT-T) would force us to modify our field artillery tactics and techniques. The offensive nature of our mission, and the unique problems encountered in certain areas (command, control, and communications; reconnaissance, selection, and occupation of position; mobility; land navigation; survey; survivability; logistics; and recovery) would require us to develop new tactics and techniques to defeat our numerically superior Iraqi foe.

One of the simplest but most helpful techniques we developed was the battalion wedge formation. It enabled us to deliver timely, accurate, and devastating fire during fast-paced offensive operations without slowing the brigade's momentum. At the same time, we conducted refuel and rearm operations as well as recovering, consolidating, and repairing damaged vehicles.

The Mission

Throughout the deployment, the missions that the 1st Cavalry Division was called upon to perform were almost exclusively offensive. During DESERT SHIELD, when the United States Central Command mission was to defend Saudi Arabia against an Iraqi attack, the division's role was to serve as the XVIII Airborne Corps' counterattack force.

The division's mission was to conduct a feint up the Wadi Al Batin to fix the Iraqi Republican Guards' attention on that avenue of approach. Its follow-on mission was to join the VII Corps attack once that element had outflanked the Republican Guards. Consequently, it was clear that the division would have to focus its planning and training on the movement to contact, meeting engagement, and hasty attack; raids (artillery, aviation, and armor); and exploitation and pursuit.

The 2d Brigade commander decided to use a brigade wedge formation (Figure 1) with a balanced task force in the lead and two tank-heavy task forces to the right and left rear. This formation was structured so that, in a meeting engagement, only one of the task forces would come into initial contact with the enemy, thereby allowing the other two to maneuver with little disruption. The brigade commander envisioned a fast-paced, non-stop, free-flowing combat operation and placed great emphasis on standardized formations and battle drills to ensure synchronized execution despite limited time for planning and rehearsing.

To ensure that fire support was adequate and synchronized with the brigade battle drill, the brigade commander and his fire support coordinator (FSCOORD)—the commander of the 3d Battalion, 82d Field Artillery—determined that the battalion would have to be able to do the following:

- Emplace the battalion on common survey and deliver accurate, predicted fire support within 15 minutes without the benefit of advance party preparation.
- Emplace close enough to the lead task force to allow the brigade commander the flexibility to develop the situation as he saw fit without having to worry about outrunning his artillery support.
- Disperse the battalion on line and in depth for survivability, without forfeiting the ability to transfer survey control rapidly.
- Maintain the ability to displace rapidly.
- Consolidate combat service support (CSS) assets (both battery and battalion level) to the rear of the formation for easier resupply and recovery without restricting the mobility of the firing batteries.

• Maintain a steady speed of 20 kilometers per hour.

• Maintain the agility to change directions and orient quickly to either flank with little guidance.

To artillerymen accustomed to adequate planning time, detailed movement orders, advance parties, and column formations, this was a tall order indeed.

Combat Elements

The 3d Battalion, 82d Field Artillery, as the primary direct support field artillery unit for a heavy maneuver brigade, is equipped with 24 M109A3 howitzers organized into three firing batteries of eight howitzers each. (The M109A3 is a 155mm, tracked, self-propelled, nuclear-capable howitzer with a maximum effective range of 18,100 meters when firing conventional separate-loading ammunition, and 23,500 meters when firing rocket-assisted projectiles.) The battalion also has a headquarters and headquarters battery (HHB) and a service battery to provide command, control, and communications and combat service support.

The basic formation we used was battalion in wedge (Figure 2), platoon in wedge, and battery in column (Figure 3). Battery B spearheaded the battalion wedge, with Battery C one kilometer to the right and one kilometer to the rear, and Battery A one kilometer to the left and one kilometer to the rear. The tactical command post (TAC-CP), consisting of the S-3's and the signal officer's HMMWVs (high mobility multipurpose wheeled vehicles) and an M113-series vehicle, was sandwiched between Batteries A and C. The main tactical operations center (TOC), minus the TAC-FIRE trucks (which traveled with the combat trains to prevent them from inhibiting the mobility of the tracked vehicles and HMMWVs), traveled about 500 meters behind the TAC-CP. Overall, the combat element portion of the battalion wedge formation occupied approximately seven square kilometers.

This formation greatly facilitated command and control, flexibility, land navigation, security, and maneuver support during movement. As Battery B was the lead element, all other units would move in relation to that battery to ensure that they kept their place in the formation.

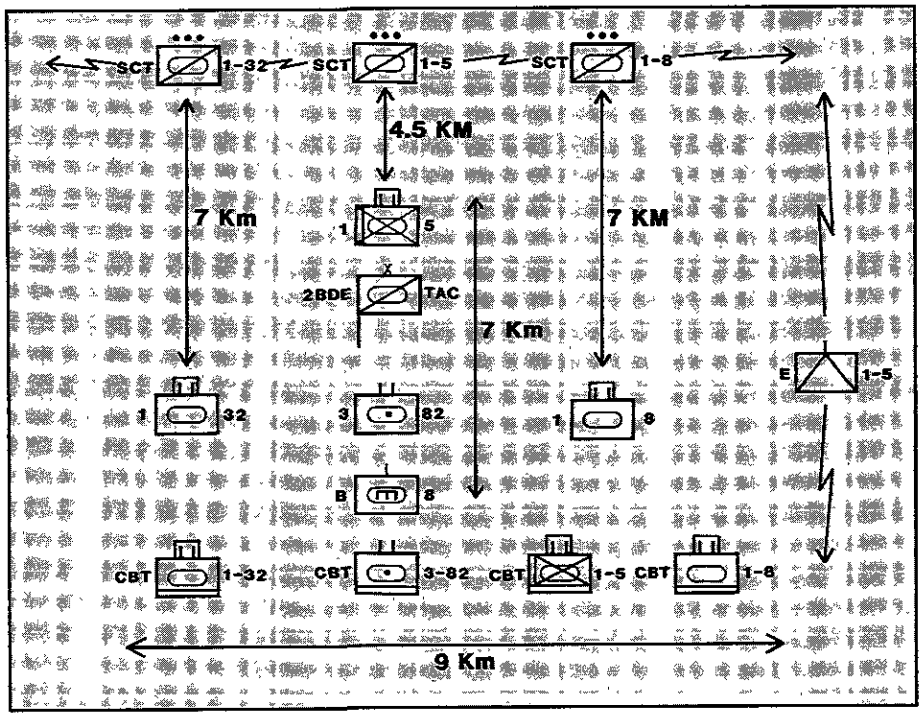


Figure 1. Brigade Wedge

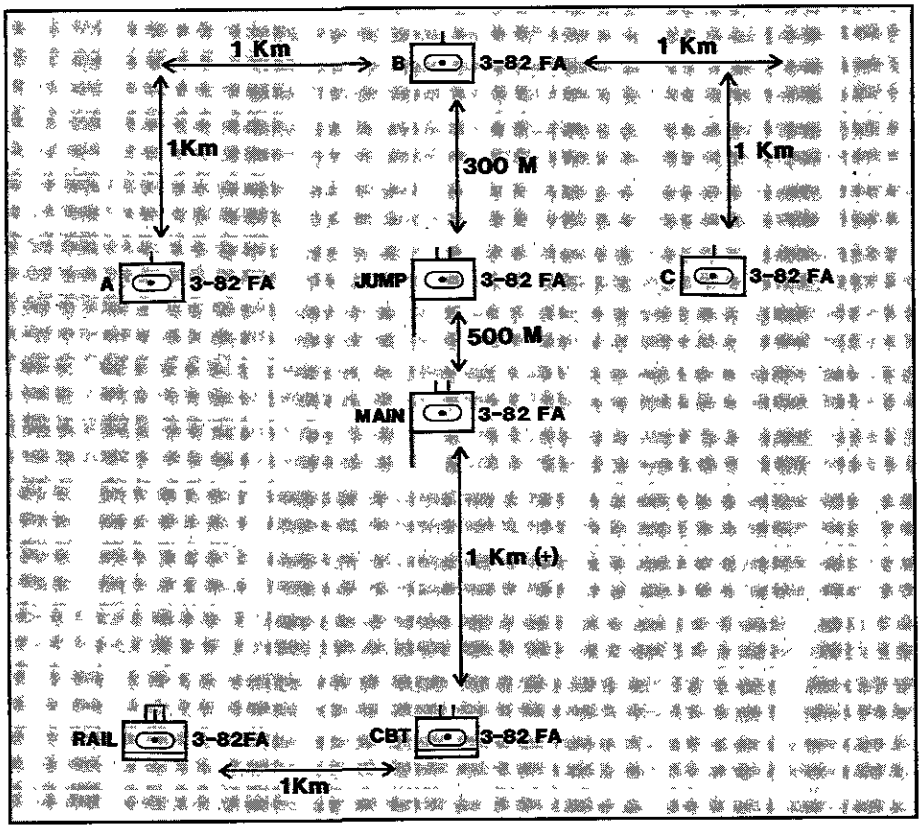


Figure 2. Battalion Wedge

The S-3 controlled this formation from the center of the battalion wedge. From this position, the S-3 could normally see all the subordinate elements from his vantage point and—because of

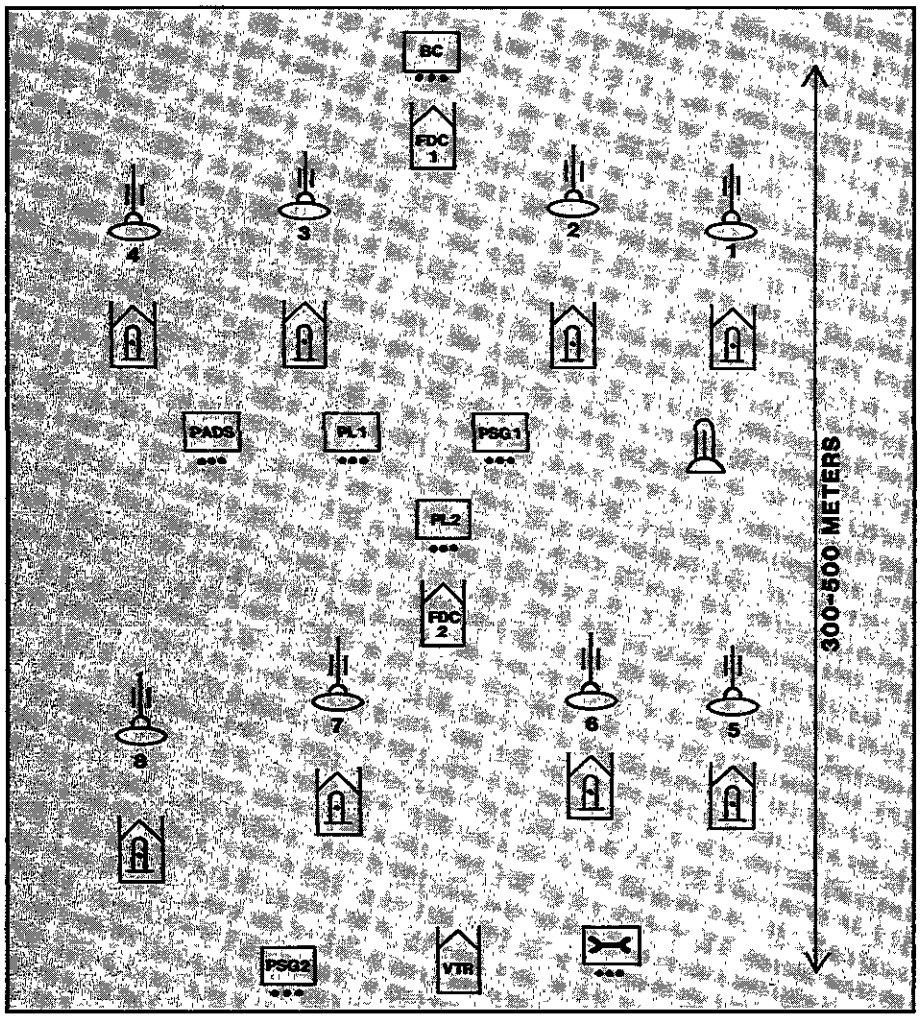


Figure 3. Battery Wedge

the relatively short distances involved and his central location—had excellent FM communications with the firing batteries. If there was a problem, or if an adjustment was needed, the S-3 would see it almost immediately and notify the appropriate battery commander. If the tactical situation dictated an abrupt change in direction of movement, the S-3 only had to issue the appropriate orders to the Battery B commander, and the other two battery commanders would automatically adjust their headings to stay in formation. This enabled us to react to rapidly changing tactical situations without a lengthy orders process or multiple FM transmissions.

The battalion wedge formation also enabled us to make the most of our limited number of navigation aids, specifically the Global Positioning System (GPS) Satellite Lightweight Global Receiver (SLGR), and the LORAN C receiver. During autonomous operations (such as artillery raids), the Battery B commander was responsible for the entire battalion's navigations. His primary means of navigation was the GPS SLGR, with a LORAN as back-up during periods of limited satellite coverage. To provide redundancy, the other battery commanders and the S-3 would track the battalion's progress with their navigation aids. The battalion wedge formation also allowed us to make navigation a consolidated effort; if a leader lost his bearings, there was always another who could cover for him. Throughout six weeks of combat operations, no battalion element was ever lost in the desert.

The battalion wedge also increased our survivability on the march, as well as our ability to support the maneuver units. During brigade operations, the battalion had two maneuver task forces on one side and one on the other, which provided excellent security. Any enemy force would have to fight its way through considerable combat power before it got to us. It also gave us maximum range coverage of the main battle area, since the battalion stayed right behind TF 1-5 Cavalry during movement. Of course, the M1A1 tanks and the M2 Bradleys could easily have outrun our M109A3s and FAASVs if the brigade commander had not set the rate of march at a speed that we could maintain.

The biggest advantage the battalion wedge gave us during occupation may have been the ability to transfer survey control rapidly and accurately. Once the brigade made contact and the brigade commander determined that he would need fire support, the firing battery commanders would be directed to emplace along a certain azimuth of fire (using the code word *red dog*). Normally, each firing battery had its own position and azimuth determining system (PADS). (Two of these were organic to the battalion and one was on loan from the division artillery.) If a PADS was not mission capable, or had missed an update, we would use conventional survey techniques to meet the requirement to mass the battalion within 15 minutes of receiving the order to occupy. Our wedge configuration, which maintained line of sight between batteries, made this particularly easy to execute. In fact, we became so proficient in transferring survey and executing hasty occupations that this time standard had dropped to 10 minutes by the end of the war, and 8 minutes was not unusual.

CSS Elements

Our battalion wedge formation facilitated the command and control of resupply, recovery, and medical evacuation operations by consolidating all CSS assets (minus the field trains, which remained with the brigade support area) under the control of the battalion XO. These assets included the combat trains (under the HHB comman-

der) and the firing battery trail party (under the senior firing battery first sergeant).

The combat trains consisted of the battalion combat trains command post, ammunition platoon, battalion maintenance, POL section, TACFIRE vehicles, and the battalion aid station. It traveled approximately one kilometer behind the battalion TOC, although the tracked combat vehicles, with their superior off-road mobility, often outran it during sustained operations.

The firing battery trail party, consisting of the firing battery supply and tool trucks, traveled about one kilometer to the left of the combat trains. Trailing everybody was the battalion XO, with the battalion mortar officer and the forward support battalion maintenance contact team.

The XO, by consolidating the CSS assets—most of which used two-and-one-half-ton and five-ton trucks and HEMTTs (heavy expanded-mobility tactical trucks)—was able to spend his time conducting logistics operations instead of tracking down lost or disabled trucks. Heavy wheeled vehicles just could not keep up with the tracked vehicles during off-road desert movements. We accepted that from the beginning and decided that it was better to keep them in a group with communications and navigation aids.

Another advantage our battalion wedge formation offered for CSS operations was that the standard layout of the formation, and the limited distances involved, eliminated any problems with navigation. Since the combat trains and the firing batteries could normally see each other, we could send fuel and ammunition HEMTTs back and forth between the batteries and the trains, without having to devote leaders and navigation aids to the task and worrying that they might get lost. Conversely, the firing batteries could easily find the battalion aid station if they had casualties to evacuate.

The battalion wedge formation also eased maintenance and recovery operations. From this vantage point, the battalion XO and battalion motor officer could see most (if not all) of the vehicles that broke down. This, coupled with the fact that they retained control over most of the battalion's maintenance and recovery assets, allowed them to "police up the battlefield" quickly and effectively.

As useful as we found the centralized approach to CSS operations, it sometimes made more sense to decentralize it to some extent. This was particularly true during exploitation and pursuit operations; the combat vehicles would leave the trains so far behind that timely resupply could not be expected. In such cases, the combat vehicles would take their CSS with them.

For example, the firing batteries used their organic M332 ammunition trailers to carry five-day Class I basic loads (both rations and potable water). Three or four ammunition HEMTTs would normally accompany the TOC to give the firing batteries ammunition they could get to easily if they needed a quick reload. Occasionally, depending on the tempo of the battle, we would have one or two HEMTTs accompany each firing battery so they could reload as they fired. HEMTTs, with their superior off-road mobility, had no problem keeping up with the tracked vehicles. Our fuel tanker HEMTTs gave us similar flexibility with Class III resupply.

We found that the tactics and techniques we had practiced in Central Europe, Korea, and the United States were not always relevant to mobile armored warfare over the flat, empty deserts of the Arabian peninsula. Consequently, we adapted to the environment and the tactical situation. The result was the battalion's wedge formation and battle drill, which proved their worth in combat.

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Combat Lifesaver Training

LIEUTENANT KYLE C. CAMPBELL

The modern battlefield poses the challenge of continuous casualty treatment and evacuation, and there are too few soldiers in medical military occupational specialties (MOSs) in units to provide that care. By doctrine, infantry and other combat arms companies have one medic per platoon and one senior medic at the company aid post or the company casualty collection point. A combat arms battalion has an organic medical platoon consisting of 24 to 32 medics.

Realizing these limitations, the U.S. Army Academy of Health Sciences